

REMARKS

Claims 1, 6, 10, 14 and 16 are amended. Claims 1-18, as amended, remain in the application. No new matter is added by the amendments to the claims.

The Rejections:

In the Office Action dated September 21, 2006, the Examiner rejected Claims 1-8, 10, 11, 13-16, and 18 under 35 U.S.C. 103(a) as being unpatentable over Hayrinen U.S. Patent No. 5411117 in view of Darwent et al. U.S. Patent No. 3768597.

Regarding Claim 1, the Examiner stated that Hayrinen discloses a hydraulic elevator repair safety platform comprised of an elongate central beam 12 having a first end and a second end, the beam 12 adapted to be releasably connected to an elevator car 1 during a repair operation. The Examiner commented that Hayrinen is silent concerning a guide clamp assembly connected to the beam and adapted to be received by an elevator guide rail system. The Examiner stated that Darwent teaches a guide clamp assembly 13 connected to a beam 21 and adapted to be received by an elevator guide rail system 25, Darwent further teaches the guide clamp assembly 13 having an actuating arm 87 adapted to be actuated by a downward movement of the elevator car 16, whereby when a central beam 21 is connected to the elevator actuation of the actuating arm 87 causes said guide clamp assembly 13 to grip the guide rail system 25, which facilitates immobilization and prevents normal operation of the elevator car 16, and it would have been obvious to one of ordinary skill in the art at the time of the invention to provide a guide clamp assembly as taught by Darwent to the central beam of the hydraulic elevator disclosed by Hayrinen to immobilize the elevator car to prevent downward drifts due to hydraulic fluid leaks and provide the elevator car with a safety brake should the car over speed in the downward direction.

Regarding Claim 2, the Examiner stated that Hayrinen further discloses a first end portion, shown in Figure 2 as the left end portion of the beam attached to the car frame, connected to the first end of the beam 12, shown in Figure 2 as the left end of the beam 12, and a second end portion, shown in Figure 2 as the right end portion of the beam attached to the car frame, connected to the second end of the beam 12 shown in Figure 2 as the right end of the

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beam 12, the first end portion and the second end portion adapted to be connected to the elevator car 1.

Regarding Claim 4, the Examiner commented that Hayrinen is further silent concerning a guide clamp assembly including a pair of guide clamps. The Examiner stated that Darwent further teaches the guide clamp assembly 13 including a pair of guide clamps 47, one of the guide clamps 47 being connected to the first end of the beam 21 and another guide clamp 47 being connected to the second end of the beam 21, the guide clamps 47 adapted to be received by the elevator guide rail system 25, wherein one guide clamp 47 is actuated by the actuating arm 87 and another guide clamp 47 is actuated by another actuating arm 95 to cause the guide clamps 47 to grip the guide rail system 25, and it would have been obvious to one of ordinary skill in the art at the time of the invention to provide a guide clamp assembly including a pair of guide clamps as taught by Darwent to the central beam of the hydraulic elevator disclosed by Hayrinen to immobilize the elevator car to prevent downward drifts due to hydraulic fluid leaks and provide the elevator car with a safety brake should the car over speed in the downward direction.

Regarding Claim 5, the Examiner commented that Hayrinen is further silent concerning a guide clamp assembly including a guide clamp linkage. The Examiner stated that Darwent further teaches a guide clamp assembly 13 includes a guide clamp linkage 89 linking one actuating arm 87 to another actuating arm 95 to provide a simultaneous actuation the guide clamps 47, and it would have been obvious to one of ordinary skill in the art at the time of the invention to provide a guide clamp assembly including a guide clamp linkage as taught by Darwent to the central beam of the hydraulic elevator disclosed by Hayrinen to immobilize the elevator car to prevent downward drifts due to hydraulic fluid leaks, provide the elevator car with a safety brake should the car over speed in the downward direction, and facilitate synchronized engagement of the guide clamps.

Regarding Claim 6, the Examiner commented that Hayrinen is further silent concerning a guide clamp assembly including a safety cable. The Examiner stated that Darwent further teaches a guide clamp assembly 13 including a safety cable 11 operatively connected to the guide clamp linkage 89 to cause actuation of the actuating arm 87, 95 of each of the guide clamps 47, and it would have been obvious to one of ordinary skill in the art at the time of the invention to

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provide a guide clamp assembly including a safety cable as taught by Darwent to the central beam of the hydraulic elevator disclosed by Hayrinen to immobilize the elevator car to prevent downward drifts due to hydraulic fluid leaks and provide the elevator car with a safety brake should the car over speed in the downward direction.

Regarding Claim 7, the Examiner commented that Hayrinen further discloses a pair of guide shoes 18 but is silent concerning the guide shoes apart of guide clamps. The Examiner stated that Darwent further teaches the guide clamps 47 including a pair of guide shoes 23 for engagement with the guide rail system 25, and it would have been obvious to one of ordinary skill in the art at the time of the invention to include a pair of guide shoes disclosed by Hayrinen to the guide clamps taught by Darwent to facilitate the guidance of the elevator and guide clamp assembly on the guide rail system.

Regarding Claim 8, the Examiner stated that Hayrinen further discloses the central beam 12 including a pair of spaced apart channel sections (not numbered but shown in Figure 3) connected by a plurality of rigging members 17.

Regarding Claim 10, the Examiner stated that Hayrinen further discloses a hydraulic elevator repair safety platform comprised of an elongate central beam 12 having a first end and a second end, the beam 12 adapted to be releasably connected to an elevator car 1, but commented that Hayrinen is silent concerning a pair of guide clamps with actuating arms. The Examiner stated that Darwent further teaches a pair of guide clamps 47, each of the guide clamps 47 being connected to an associated one of the first and second ends of a beam 21 and adapted to be received by an elevator guide rail system 25, further teaches each of said guide clamps 47 having an actuating arm 87 for actuation by a downward movement of the elevator car, whereby when the central beam 21 is connected to the elevator car 16 the actuation of the actuating arm 87, 95 of each of the guide clamps 47 causes the guide clamps 47 to grip the guide rail system 25 which facilitates immobilization and prevents normal operation of the elevator car 16, and it would have been obvious to one of ordinary skill in the art at the time of the invention to provide guide clamps having actuating arms as taught by Darwent to the central beam of the hydraulic elevator disclosed by Hayrinen to immobilize the elevator car to prevent downward drifts due to hydraulic

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fluid leaks and provide the elevator car with a safety brake should the car over speed in the downward direction.

Regarding Claim 11, the Examiner commented that Hayrinen discloses a first end portion and said second end portion, shown in Figure 2, adapted to be connected to the elevator car 1, but Hayrinen is silent concerning a first and second end portion disposed between a first and second end of the beam and guide clamps. The Examiner stated that Darwent further teaches a first end portion disposed between a first end of a beam 21, shown in Figure 5 as the left side of beam 21, and one of the guide clamps 47, and a second end portion disposed between said second end of the beam 21, shown in Figure 5 as the right side of beam 21, and another of said guide clamps 47, further teaches the first end portion and said second end portion adapted to be connected to the elevator car 16, and it would have been obvious to one of ordinary skill in the art at the time of the invention to dispose the first and second end portion of the beam disclosed by Hayrinen between the first and second end of the beam and guide clamps taught by Darwent to facilitate the connection between the elevator car and the guide clamps.

Regarding Claim 13, the Examiner commented that Hayrinen is further silent concerning a guide clamp linkage. The Examiner stated that Darwent further teaches a guide clamp linkage 89 linking the actuating arms 87, 95 to provide a simultaneous actuation of the actuating arms 87, 95, and it would have been obvious to one of ordinary skill in the art at the time of the invention to provide a guide clamp assembly including a guide clamp linkage as taught by Darwent to the central beam of the hydraulic elevator disclosed by Hayrinen to immobilize the elevator car to prevent downward drifts due to hydraulic fluid leaks, provide the elevator car with a safety brake should the car over speed in the downward direction, and facilitate synchronized engagement of the guide clamps.

Regarding Claim 14, the Examiner commented that Hayrinen is further silent concerning a safety cable. The Examiner stated that Darwent further teaches a safety cable 11 connected to the guide clamp linkage 89 for actuation of actuating arms, and it would have been obvious to one of ordinary skill in the art at the time of the invention to provide a guide clamp assembly including a safety cable as taught by Darwent to the central beam of the hydraulic elevator disclosed by Hayrinen to immobilize the elevator car to prevent downward drifts due to hydraulic

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fluid leaks and provide the elevator car with a safety brake should the car over speed in the downward direction.

Regarding Claim 15, the Examiner commented that Hayrinen further discloses a pair of guide shoes 18 to engage the elevator guide rail system 5 but is silent concerning the pair of guide shoes connected to guide clamps. The Examiner stated that Darwent further teaches a pair of guide shoes 23 connected to each of the guide clamps 47 to engage the elevator guide rail system 25, and it would have been obvious to one of ordinary skill in the art at the time of the invention to include a pair of guide shoes disclosed by Hayrinen to the guide clamps taught by Darwent to facilitate the guidance of the elevator and guide clamp assembly on the guide rail system.

Regarding Claim 16, the Examiner commented that Hayrinen further discloses a hydraulic elevator repair safety platform comprised of an elongate central beam 12 having a first end and a second end, further discloses a first end portion, shown in Figure 2 as the left end portion of the beam attached to the car frame, disposed on the first end of the beam 12, shown in Figure 2 as the left end of the beam 12, and adapted to be connected to an elevator car; a second end portion, shown in Figure 2 as the right end portion of the beam attached to the car frame, disposed on the second end of said beam, shown in Figure 2 as the right end of the beam 12, and adapted to be releasably connected to the elevator car, but is silent concerning a pair of guide clamps adapted to be received by an elevator guide rail system. The Examiner stated that Darwent further teaches a pair of guide clamps 47 adapted to be received by an elevator guide rail system 25, one of the guide clamps 47 connected to a first end portion and another of the guide clamps 47 connected to the second end portion, further teaches each of the guide clamps 47 having an actuating arm 87, 95, whereby when the central beam 21 is connected to the elevator car 16 the actuation of the actuating arm 87, 95 of each of the guide clamps 47 causes the guide clamps 47 to grip the guide rail system 25 which facilitates immobilization and prevents normal operation of the elevator car 16, further teaches a guide clamp linkage 89 linking said actuating arms 87, 95 to provide a simultaneous actuation of the actuating arms 87, 95, further teaches a cable 11 operatively connected to the guide clamp linkage 89 to cause actuation of the actuating arms 87, 95 in response to a downward movement of the elevator car, and it would have been

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obvious to one of ordinary skill in the art at the time of the invention to provide a guide clamp assembly as taught by Darwent to the central beam of the hydraulic elevator disclosed by Hayrinen to immobilize the elevator car to prevent downward drifts due to hydraulic fluid leaks and provide the elevator car with a safety brake should the car over speed in the downward direction.

Regarding Claim 18, the Examiner commented that Hayrinen further discloses a pair of guide shoes 18 to engage the elevator guide rail system 5, but is silent concerning guide shoes connected to guide clamps. The Examiner stated that Darwent further teaches a pair of guide shoes 23 connected to each of the guide clamps 47 to engage the elevator guide rail system 25, and it would have been obvious to one of ordinary skill in the art at the time of the invention to include a pair of guide shoes disclosed by Hayrinen to the guide clamps taught by Darwent to facilitate the guidance of the elevator and guide clamp assembly on the guide rail system.

The Examiner rejected Claim 3 under 35 U.S.C. 103(a) as being unpatentable over Hayrinen in view of Darwent, and further in view of Chapelain et al. U.S. Patent No. 5035300. The Examiner commented that Hayrinen is further silent concerning an adjustably connected first and second end portion. The Examiner stated that Chapelain teaches a first end portion 3 adjustably connected to a first end of a beam 1 and a second end portion 3 is adjustably connected to a second end of said beam 1 for selectively varying a distance between said first and second end portions 3, and it would have been obvious to one of ordinary skill in the art at the time of the invention to adjustably connect first and second end portions taught by Chapelain to the first and second end of the beam disclosed by Hayrinen to supply means to adapt to various elevator cars.

Regarding Claim 17, the Examiner commented that Hayrinen is further silent concerning an adjustably connected first and second end portion. The Examiner stated that Chapelain teaches a first end portion 3 adjustably connected to a first end of a beam 1 and a second end portion 3 is adjustably connected to a second end of said beam 1, and it would have been obvious to one of ordinary skill in the art at the time of the invention to adjustably connect first and second end portions taught by Chapelain to the first and second end of the beam disclosed by Hayrinen to supply means to adapt to various elevator cars.

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The Examiner rejected Claim 9 under 35 U.S.C. 103(a) as being unpatentable over Hayrinen in view of Darwent, and further in view of Mizuno JP Publication No. 04-341478. The Examiner commented that Hayrinen discloses rigging members 17 attached to channel sections 27, but is silent concerning rigging members including U-bolts and retaining rod. The Examiner stated that Mizuno teaches rigging members include U-bolts 14 attached to channel sections 5 and to retaining rods 13 extending between the channel sections 5, and it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the channel sections disclosed by Hayrinen with U-bolts attached to channel sections and to retaining rods extending between the channel sections to facilitate the connection between the channel sections of the beam.

The Response:

Applicant amended independent Claims 1, 10 and 16 to clarify that the guide clamp assembly includes a safety cable. Claims 6 and 14 are amended to be consistent with Claims 1 and 10 respectively. All of the claims define a hydraulic elevator repair safety platform wherein when the central beam is temporarily connected to the elevator car and the safety cable is temporarily connected to a shaft in which the elevator car travels, normal operation of the elevator car is prevented. After the central beam and the safety cable are connected, the elevator is lowered, thereby tensioning the safety cable and actuating the guide clamps to grip the guide rail.

It is important to note that the claimed repair safety platform prevents normal operation of the elevator car during the time that it is installed. The reason for this is that the roller/slide guides required for normal operation of the elevator car are removed from the underside of the car in order to attach the guide shoe plates 26 at the point where the roller/slide guides were removed. (See Page 3, Lines 22-27)

Hayrinen shows a safety device that is an arrester permanently attached to the elevator car to prevent downward drift from a floor. This arrester does not prevent normal operation of the elevator car and is not temporarily connected during a repair operation. Furthermore, the Hayrinen arrester is not actuated by downward movement of the elevator car as defined by

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Applicant's claims. The Häyrinen arrester 10 is actuated by disconnection of electrical power from the magnets 21. There is no safety cable associated with the Häyrinen arrester 10.

Darwent et al. shows a flexible guide clamp safety 13 permanently mounted in the lower horizontal channel members 21 of the car sling. A lever arm 87 is connected to a rotatable shaft 65 that is rotated by downward movement of the elevator car. Rotation of the lever arm 87 brings braking surfaces 47a into contact with the guide rail 25 to retard the movement of a suspended elevator car should it over speed in the downward direction. This safety does not prevent normal operation of the elevator car and is not used during a repair operation. This safety is actuated by a rope 11 of an overspeed governor 9 that moves with the elevator car and is not connected to the elevator shaft.

Chapelain shows an elevator sheave support beam having an upper tubular body 1 housing a telescopic arm 3 at each end. The arms 3 are retracted for ease of positioning in the elevator shaft and then are extended into the shaft recesses and locked in position. The body 1 is not mounted on an elevator car and is permanently mounted to a building. The body 1 does not prevent normal operation of the elevator car and is not used during a repair operation.

The Japanese reference shows a hanger wheel mounting shaft 13 attached to an elevator car frame lower beam 5 by U-bolts 14. The beam 5 is permanently attached to the elevator car frame. The beam 5 does not prevent normal operation of the elevator car and is not used during a repair operation.

There is no combination of Häyrinen and Darwent that results in the claimed invention. Häyrinen does not show a removable repair platform, the Häyrinen device only functions to prevent drifting at floors and does not work between floors, the Häyrinen device does not include a safety cable, and the Häyrinen device does not prevent movement of the car since it has the buffers 13 that permit limited movement.

Darwent does not show a removable repair platform, the Darwent device only functions in response to an overspeed condition, and the Darwent device does not include a safety cable connected to the shaft. If the Häyrinen device and the Darwent device are combined in the manner suggested by the Examiner, such a combination does not result in a removable repair platform, would not prevent normal operation of the elevator and would lack the claimed safety

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cable. The Darwent rope 11 is not the claimed safety cable because the rope is connected to and moves with the elevator and is not connected to the elevator shaft. The Darwent rope 11 is suspended in the elevator shaft just like the Darwent elevator car (See Fig. 1).

There is no combination of the cited references that shows or suggests the claimed invention. Specifically, the references do not show or suggest a repair safety platform for temporary installation on an elevator car wherein the platform is releasably connected to the car and the safety cable is temporarily connected to the shaft during a repair operation and both are removed after the repair operation, and wherein when the platform is connected to the car and the safety cable is connected to the shaft, normal operation of the car is prevented.

In view of the amendments to the claims and the above arguments, Applicant believes that the claims of record now define patentable subject matter over the art of record. Accordingly, an early Notice of Allowance is respectfully requested.

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